

CLAIMS

1. A method of treating hair, skin, or the underarm comprising applying to hair, skin, or the underarm, an oil-in-water (O/W) or water-in-oil (W/O) emulsion or microemulsion composition containing an elastomeric silane or siloxane having quaternary ammonium groups in its molecule as the oil phase of the emulsion or microemulsion, prepared by reacting (i) an organic quaternary ammonium compound having epoxide groups or halohydrin groups in its molecule, with (ii) a silane or siloxane having amino groups in its molecule, in the presence of (iii) a crosslinking agent, and (iv) a surfactant, dispersed in (v) an aqueous polar phase.
2. A method according to Claim 1 in which the organic quaternary ammonium compound having epoxide groups is glycidyl trimethylammonium chloride or glycidyl trimethylammonium bromide.
3. A method according to Claim 1 in which the organic quaternary ammonium compound having halohydrin groups is selected from the group consisting of (3-chloro-2-hydroxypropyl)trimethylammonium chloride, (3-chloro-2-hydroxypropyl)dimethyldodecylammonium chloride, (3-chloro-2-hydroxypropyl)dimethyloctadecylammonium chloride, (3-chloro-2-hydroxypropyl)trimethylammonium bromide, (3-chloro-2-hydroxypropyl)dimethyldodecylammonium bromide, and (3-chloro-2-hydroxypropyl)dimethyloctadecylammonium bromide.
4. A method according to Claim 1 in which the aqueous polar phase is water.
5. A method according to Claim 1 in which the aqueous polar phase comprises water and a polar organic compound.
6. A method according to Claim 5 in which the polar organic compound is selected from the group consisting of monohydroxy alcohols, diols, triols, glycerol esters, and polyglycols.

7. A method according to Claim 1 in which the crosslinking agent is selected from the group consisting of organic epoxides containing at least two epoxy groups, epoxy functional silicones containing at least two epoxy groups, chlorohydrins, substituted di(meth)acrylates, unsubstituted di(meth)acrylates, oligo(meth)acrylates, substituted mono(meth)acrylates, hydroxyalkyl acrylates, and isocyanates,

8. A method according to Claim 1 in which the hair, skin, or the underarm is treated with a antiperspirant, deodorant, skin cream, skin care lotion, moisturizer, facial treatment, acne remover, wrinkle remover, personal cleanser, facial cleanser, bath oil, perfume, cologne, sachet, sunscreen, pre-shave lotion, after-shave lotion, shaving soap, shaving lather, hair shampoo, hair conditioner, hair colorant, hair relaxer, hair spray, mousse, styling gel, permanent, depilatorie, cuticle coat, make-up, color cosmetic, foundation, blush, lipstick, eyeliner, mascara, oil remover, color cosmetic remover, bath powder, body powder, pharmaceutical, biocide, or biologically active substance, each of which contains the oil-in-water (O/W) or water-in-oil (W/O) emulsion or microemulsion composition.

9. A method according to Claim 1 in which the hair, skin, or the underarm is treated with a cellulosic substrate, synthetic nonwoven substrate, wet-cleansing wipe, tissue, or towel, each of which contains the oil-in-water (O/W) or water-in-oil (W/O) emulsion or microemulsion composition.

10. An antiperspirant, deodorant, skin cream, skin care lotion, moisturizer, facial treatment, acne remover, wrinkle remover, personal cleanser, facial cleanser, bath oil, perfume, cologne, sachet, sunscreen, pre-shave lotion, after-shave lotion, shaving soap, shaving lather, hair shampoo, hair conditioner, hair colorant, hair relaxer, hair spray, mousse, styling gel, permanent, depilatorie, cuticle coat, make-up, color cosmetic, foundation, blush, lipstick, eyeliner, mascara, oil remover, color cosmetic remover, bath powder, body powder, pharmaceutical, biocide, or biologically active substance, containing the oil-in-water (O/W) or water-in-oil (W/O) emulsion or microemulsion composition prepared according to the method as defined in Claim 1.

11. A cellulosic substrate, synthetic nonwoven substrate, wet-cleansing wipe, tissue, or towel, containing the oil-in-water (O/W) or water-in-oil (W/O) emulsion or microemulsion composition prepared according to the method as defined in Claim 1.

5 12. A method of treating hair, skin, or the underarm comprising applying to the hair, skin, or the underarm, an oil-in-water (O/W) or water-in-oil (W/O) emulsion or microemulsion composition containing an elastomeric silane or siloxane having nitrogen atoms, as the oil phase of the emulsion or microemulsion, comprising the sequential steps of:

10 (i) preparing a first mixture containing only silanes or siloxanes having amino groups in their molecule and a surfactant;

(ii) preparing a second mixture by adding a first portion of an aqueous polar phase to the first mixture;

(iii) preparing a third mixture by adding the balance of the aqueous polar phase to the second mixture;

15 (iv) preparing a fourth mixture by adding a crosslinking agent to the third mixture; and

(v) heating the fourth mixture.

13. A method according to Claim 12 in which the aqueous polar phase is water.

20 14. A method according to Claim 12 in which the aqueous polar phase comprises water and a polar organic compound.

15. A method according to Claim 14 in which the polar organic compound is selected from the group consisting of monohydroxy alcohols, diols, triols, glycerol esters, and polyglycols.

25 16. A method according to Claim 12 in which the crosslinking agent is selected from the group consisting of organic epoxides containing at least two epoxy groups, epoxy functional silicones containing at least two epoxy groups, chlorohydrins, substituted di(meth)acrylates, unsubstituted di(meth)acrylates, oligo(meth)acrylates, substituted mono(meth)acrylates,
30 hydroxyalkyl acrylates, and isocyanates.

17. A method according to Claim 12 in which the hair, skin, or the underarm is treated with a antiperspirant, deodorant, skin cream, skin care lotion, moisturizer, facial treatment, acne remover, wrinkle remover, personal cleanser, facial cleanser, bath oil, perfume, cologne, sachet, sunscreen, pre-shave lotion, after-shave lotion, shaving soap, shaving lather, hair
5 shampoo, hair conditioner, hair colorant, hair relaxer, hair spray, mousse, styling gel, permanent, depilatorie, cuticle coat, make-up, color cosmetic, foundation, blush, lipstick, eyeliner, mascara, oil remover, color cosmetic remover, bath powder, body powder, pharmaceutical, biocide, or biologically active substance, each of which contains the oil-in-water (O/W) or water-in-oil (W/O) emulsion or microemulsion composition.

10

18. A method according to Claim 12 in which the hair, skin, or the underarm is treated with a cellulosic substrate, synthetic nonwoven substrate, wet-cleansing wipe, tissue, or towel, each of which contains the oil-in-water (O/W) or water-in-oil (W/O) emulsion or microemulsion composition.

15

19. An antiperspirant, deodorant, skin cream, skin care lotion, moisturizer, facial treatment, acne remover, wrinkle remover, personal cleanser, facial cleanser, bath oil, perfume, cologne, sachet, sunscreen, pre-shave lotion, after-shave lotion, shaving soap, shaving lather, hair
shampoo, hair conditioner, hair colorant, hair relaxer, hair spray, mousse, styling gel,
20 permanent, depilatorie, cuticle coat, make-up, color cosmetic, foundation, blush, lipstick, eyeliner, mascara, oil remover, color cosmetic remover, bath powder, body powder, pharmaceutical, biocide, or biologically active substance, containing an oil-in-water (O/W) or water-in-oil (W/O) emulsion or microemulsion composition including an elastomeric silane or siloxane having quaternary ammonium groups.

25

20. A cellulosic substrate, synthetic nonwoven substrate, wet-cleansing wipe, tissue, or towel, containing an oil-in-water (O/W) or water-in-oil (W/O) emulsion or microemulsion composition including an elastomeric silane or siloxane having quaternary ammonium groups.

30